TFHRC Researcher's Directory

Turner-Fairbank Highway Research Center
6300 Georgetown Pike
McLean, VA 22101-2296

Also known as the Federal Highway Administration's (FHWA) Office of the Associate Administrator for Research and Development, the Turner-Fairbank Highway Research Center (TFHRC) is the FHWA's primary research facility. Located on a 17.8-hectare site in McLean, Virginia, the Center conducts vital highway research and development projects.

TFHRC's expert staff is dedicated to addressing the problems facing transportation engineers today, and their work is briefly described in this booklet. The booklet is categorized into 7 areas of research that use more than 40 laboratories and support facilities. The contacts listed for each area are available to discuss ongoing and future research projects with the highway community.

John A. Clements, P.E.
Associate Administrator for Research and Development

Contents Page

HUMAN FACTORS

Office of Safety and Traffic Operations R&D
Director, (703) 285-2021

Traffic and Driver Information Systems Division
Samuel Tignor, Chief, (703) 285-2031

The human factors research program studies driver interactions with highway features and highway operations. Research is aimed at improving traffic control devices and developing and evaluating the technology for modern vehicle-based information systems, including Intelligent Transportation Systems (ITS).

EXPERTISE AREAS

Driver Performance
Truman Mast, 285-2404

Older Drivers
Elizabeth Alicandri, 285-2415

User Characteristics
Joseph Moyer, 285-2008

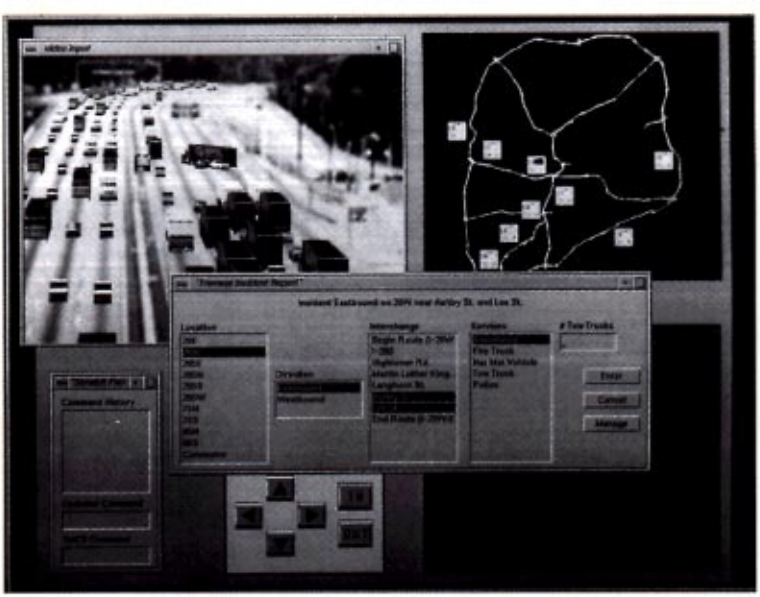
Visibility
Carole Simmons, 285-2423

LABS

Highway Driving Simulator
Elizabeth Alicandri, 285-2415

Human Factors
Truman Mast, 285-2404

Photometric and Visibility
John Arens, 285-2427



Using simulated real-time information, researchers at TFHRC and Georgia Tech Research Institute investigate the human factors requirements for traffic management operators.

INTELLIGENT TRANSPORTATION SYSTEMS

Office of Safety and Traffic Operations R&D
Director, (703) 285-2021

Intelligent Systems and Technology Division
John MacGowan, Chief, (703) 285-2027

Intelligent Transportation Systems (ITS) development is a major component of the FHWA research program. Its purpose is to reduce congestion and enhance the quality and safety of travel through:

- Advanced corridor and areawide traffic signal and freeway management systems.
- Innovative real-time traveler information and communications systems.
- Automation of selected safety monitoring functions and the regulatory and fiscal functions affecting commercial vehicles.
- Advanced vehicle-control systems that pertain to the highway.
- Advanced analytical techniques using electronics, computer simulation, and mathematical modeling.
- Automated vehicle-highway systems.

EXPERTISE AREAS

Freeway and Traffic Signal Systems
Debbie Glitz, 285-2542

Dynamic Traffic Assignment
Henry Lieu, 285-2410

Traffic Flow Theory
Alberto Santiago, 285-2092

Freeway Simulation
Henry Lieu, 285-2410

Urban Network Simulation
James Clark, 285-2681

Real-Time Control Systems
James Clark, 285-2681

ATMS Control Centers Support Systems
Alberto Santiago, 285-2092

Highway Capacity
Alberto Santiago, 285-2092

ITS Environmental Impacts
Aladdin Barkawi, 285-2093

Multimodal Transportation
Aladdin Barkawi, 285-2093

Traffic Surveillance Systems
Debbie Glitz, 285-2542

Traffic Sensor Hardware
Pete Mills, 285-2402

Radio and Communications Systems
Frank Mammano, 285-2405

Advanced Vehicle Control Systems
Nick Panebianco, 285-2408

Automated Highway Systems
Dick Bishop, 285-2680

Global Positioning System
Jim Arnold, 285-2974

Operational Test Evaluations
Mike Freitas, 285-2421

Commercial Vehicle Operations System Design
Mike Curtis, 285-2991

ITS Standards
Frank Mammano, 285-2405

Research Centers of Excellence
Mike Freitas, 285-2421

ITS IDEA Program
Dave Gibson, 285-2407

INTELLIGENT TRANSPORTATION SYSTEMS

Human Factors
Truman Mast, 285-2404
Spectrum Availability
Frank Mammano, 285-2405
Traveler Navigation
Jim Arnold, 285-2974
Advanced Research and Traffic Operations
James Wentworth, 285-2748

LABS

Traffic Management Laboratory
(Located at 6862 Elm Street, Suite 700, McLean, VA, 22101)
Alberto Santiago, 285-2092
Saxton Highway Electronics Laboratory (SHEL)
Kenneth Moore, 285-2466

The ITS program helps advance freeway management systems and automate certain highway functions, like toll booths.

PAVEMENTS

Office of Engineering R&D
Charles Nemmers, Director, (703) 285-2001

Pavement Performance Division
Charles Churilla, Chief, (703) 285-2355

Special Projects and Engineering Division
Roy Trent, Chief, (703) 285-2435

The pavements program researches technologies that will help build better highway pavements and provide the means to extend the life of existing pavements. To accomplish this, pavement research is focused in four areas: Long-Term Pavement Performance (LTPP), performance modeling, truck-pavement interaction, and materials. The LTPP program encompasses a 20-year research effort to improve the design, construction, and management of pavements in a cost-effective manner. It involves approximately 3,000 pavement test sections located on highways throughout North America. Performance modeling and truck-pavement interaction are research areas that include: analysis of LTPP data, performance-related specifications for highway construction, and performance evaluation for network pavement management. Materials research is conducted to produce more reliable insights into the physical and chemical behavior of construction materials. The results from this work will improve the criteria and test methods used to ensure quality construction materials.

EXPERTISE AREAS

Aggregates
Stephen Forster, 285-2073

Asphalt Binders
Ernie Bastian, 285-2086

Asphalt Materials Program
Ray Bonaquist, 285-2629

Asphalt Mixtures
Kevin Stuart, 285-2627

Concrete Materials
Marcia Simon, 285-2069

Materials and Information Technology Systems
Lou Colucci, 285-2515

Modified Asphalt
Brian Chollar, 285-2342

Pavement Texture and Roughness
Dennis Sixbey, 285-2473

Portland Cement Concrete Program
Stephen Forster, 285-2073

Recycling Program
Doug Brown, 285-2626

Waste and Byproduct Materials
Marcia Simon, 285-2069

Water Quality and Environment
Howard Jongedyk, 285-2085

Exploratory Research
Dick Livingston, 285-2903

Construction
Charles Woo, 285-2444

Pavement Management
Doug Brown, 285-2626

Asphalt Concrete Specifications
Terry Mitchell, 285-2434

Portland Cement Concrete Specifications
Peter Kopac, 285-2432

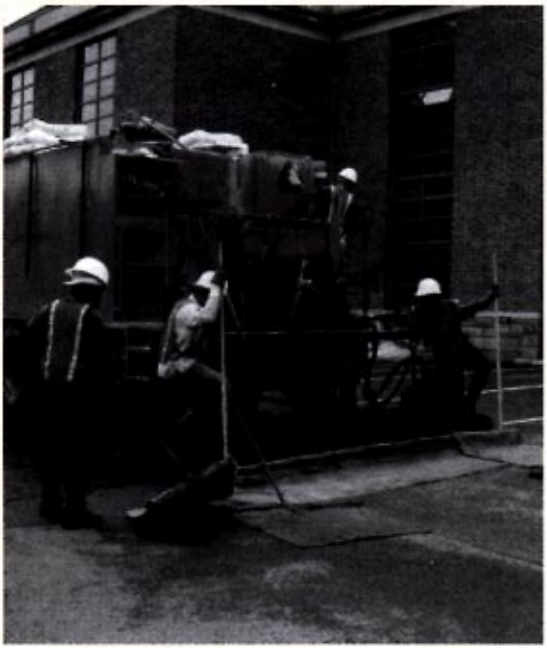
Truck Size and Weight Specifications
James Sherwood, 285-2619

PAVEMENTS

Road Base and Subbase Specifications
Ray Bonaquist, 285-2629
LTPP Data Analysis
Cheryl Richter, 285-2183
LTPP Field Operations
Monte Symons, 285-2730
LTPP Information Management System
Shahed Rowshan, 285-2527
LTPP Materials Testing
Aramis Lopez, 285-2013
LTPP Seasonal Monitoring
Aramis Lopez, 285-2013
LTPP Superpave
Monte Symons, 285-2730
LTPP SHRP Highway Operations, Concrete and Structures
Bill Bellinger, 285-2530
LTPP Distress Evaluation
John Klemunes, 285-2526
LTPP Traffic Engineering
Kris Gupta, 285-2528

LABS

Accelerated Load Facility
Terry Mitchell, 285-2434
TFHRC Test Road
Bill Kenis, 285-2064
Pavement Isothermal Testing
James Sherwood, 285-2619
Pavement Instrumentation
Dennis Sixbey, 285-2473
Bituminous Mixtures Complex
Kevin Stuart, 285-2627
Chemistry Lab Complex
Brian Chollar, 285-2342
Pavement Binders
Brian Chollar, 285-2342
Petrographic
Stephen Forster, 285-2073
Spectroscopy
Brian Chollar, 285-2342



Slurry pavers demonstrate a new type of thin seal for members of the FHWA County Road Advisor Meeting at TFHRC.

SAFETY

Office of Safety and Traffic Operations R&D
Director, (703) 285-2021

Safety Design Division
Chief, (703) 285-2057

Traffic and Driver Information Systems Division
Samuel Tignor, Chief, (703) 285-2031

The safety research program works to improve the safety of our Nation's highways. High-priority work includes improving nighttime visibility, developing in-vehicle information systems, creating a highway safety information system, improving traffic control devices and methods, developing new approaches for accident analysis, developing a procedure for assessing the safety impacts of alternative highway designs, developing new modeling techniques to improve roadside design, studying driver and vehicle interactions with the highway, and improving pedestrian and bicyclist facilities.

Studies pertaining to visibility, sign and pavement marking retroreflectivity, and pedestrian/bicyclist safety are conducted at TFHRC.

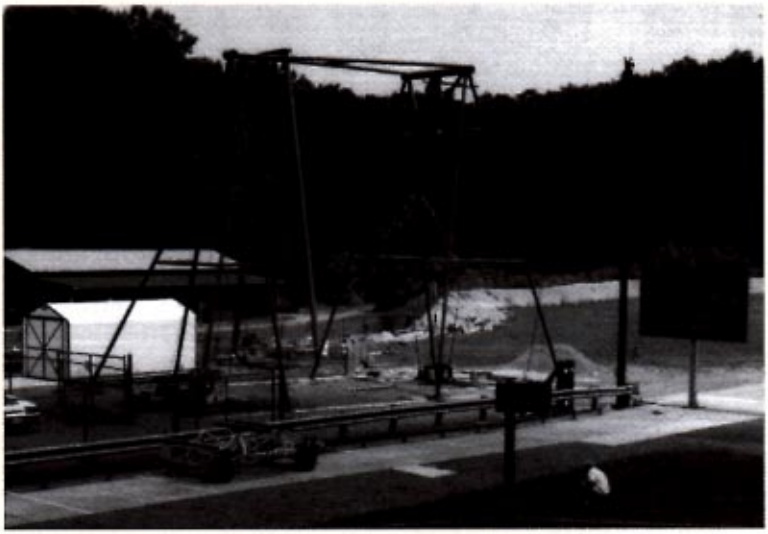
SAFETY

EXPERTISE AREAS

In-Vehicle Information Systems
Paul Pisano, 285-2498
Traffic Control Devices and Traffic Engineering
Howard Bissell, 285-2428
Driver Behavior
Truman Mast, 285-2404
Visibility
Carole Simmons, 285-2423
Safety Information Systems
Jeffrey Paniati, 285-2568
Geometric Design
Justin True, 285-2121
Finite Element Analysis/Simulation
Marty Hargrave, 285-2508
Roadside Safety Hardware
Charlie McDevitt, 285-2418
Roadside Accident Research/ Vehicle Dynamics
John Viner, 285-2419
Statistics
Michael Griffith, 285-2382
Pedestrian/Bicyclist
Carol Tan, 285-2071
Advanced Research and Traffic Operations
James Wentworth, 285-2748

LABS

FHWA/NHTSA National Crash Analysis Center
(Located at George Washington University's Virginia Campus)
Len Meczkowski, 285-2420
Federal Outdoor Impact Lab (FOIL)
Richard King, 285-2468
Geometric Design
Justin True, 285-2121
Highway Safety Information Systems
Jeffrey Paniati, 285-2568
Photometric and Visibility
John Arens, 285-2427



The Federal Outdoor Impact Laboratory crashes cars into roadside hardware to collect data that will help researchers design safer roadside hardware.

STRUCTURES

Office of Engineering R&D
Charles Nemmers, Director, (703) 285-2001

Structures Division
James Cooper, Chief, (703) 285-2087

Special Projects and Engineering Division
Roy Trent, Chief, (703) 285-2435

The structures program focuses on the research needed to manage more than 575,000 bridges nationally, to provide the technologies needed to extend their service life, and to design and build new ones. Program research areas include bridge design and management (infrastructure); hazard mitigation (scour, hydrology, and hydraulics and seismic/wind forces); high-performance materials; and foundations. Currently, research efforts are focused in two areas: (1) to develop nondestructive technology that evaluates the structural condition of highway bridges and to identify the means of protecting and preserving their structural capacity; and (2) to reduce structural maintenance requirements and improve construction work by using high-performance materials and/or innovative design concepts.

EXPERTISE AREAS

Seismic Research
Phil Yen, 285-2315

Natural Hazards
Harold Bosch, 285-2753

High-Performance Materials
Susan Lane, 285-2111

Geotechnical
Al DiMillio, 285-2436

Bridge Infrastructure
John O'Fallon, 285-2089

Fiber-Reinforced Polymers
Eric Munley, 285-2438

Corrosion Protection of Concrete
Paul Virmani, 285-2439

Timber Bridges
Sheila Duwadi, 285-2472

Fatigue and Brittle Fracture
Bill Wright, 285-2496

Structural Analysis
Hamid Ghasemi, 285-2447

Bridge Management and Nondestructive Evaluation
Steven Chase, 285-2442

Foundation Systems
Mike Adams, 285-2161

Structures Instrumentation/Test
Ron Nelson, 285-2327

Structures Support Services
Masoud Nasabzadeh, 285-2497

Bridge Coating Systems Program
John Peart, 285-2329

Nondestructive Evaluation Development Program
Glenn Washer, 285-2388

Mechanical Design/Fabrication
Rick Ablaza, 285-2097

Exploratory Research
Dick Livingston, 285-2903

Paint Durability
Shaung-Ling Chong, 285-2726

STRUCTURES

LABS

Aerodynamics
Harold Bosch, 285-2753

Bridge Management Information Systems
Steven Chase, 285-2442

Hydraulics
J. Sterling Jones, 285-2474

Structures
Lloyd Cayes, 285-2463

Concrete Lab Complex
Marcia Simon, 285-2069

Corrosion
Shaung-Ling Chong, 285-2726

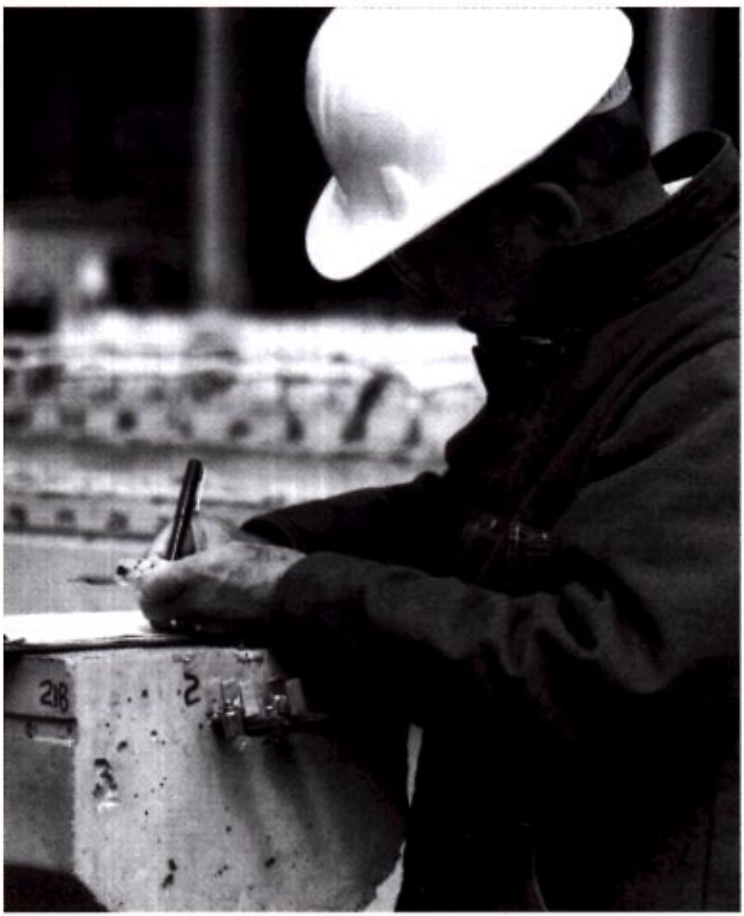
Paint
Shaung-Ling Chong, 285-2726

Soils and Foundations
Carl Ealy, 285-2433

Mechanical Design/Fabrication
Rick Ablaza, 285-2097

Nondestructive Testing
Glenn Washer, 285-2388

Structural Materials Evaluation
Glenn Washer, 285-2388



Researcher measures the end-slip of strands inside an experimental bridge girder.

SUPPORT SERVICES

Office of R&D Operations and Support
Robert Kreklau, Director, (703) 285-2104

TFHRC has several support facilities to help the research and development offices perform their functions. Among the support facilities are the Publications Office, the Research and Technology Report Center, the Technical Reference Center, Computer Services, the Saxton Highway Electronics Laboratory, and the Mechanical Design/Fabrication Shop.

PUBLICATIONS STAFF

Anne Barsanti, (703) 285- 2102

Publications Staff provide editorial, publishing, and conference scheduling services to the Office of the Associate Administrator for Research and Development. The staff edits and publishes more than 200 technical publications each year. In addition, the staff publishes the quarterly magazine, *Public Roads;* two annual reports; and a monthly newsletter--the *Research and Technology Transporter*. The staff also develops special reports and prepares a variety of papers, speeches, letters, and flyers to support R&D. Expertise in computer graphics and presentations enhances the publications staff's ability to support R&D outreach efforts and to assist in public affairs.

R&T REPORT CENTER

Charles Niessner, (703) 285-2100

Center Manager, Chris Gaskins, (703) 285-3029

R&T Order Desk, (703) 285-2144 FAX, (703) 285-2919

The Research and Technology (R&T) Report Center serves the FHWA, other transportation agencies, and the public by distributing the publications of the Office of R&D, the Office of Technology Applications, and other offices. The Center also works with the National Technical Information Service.

SUPPORT SERVICES

TECHNICAL REFERENCE CENTER

Charles Niessner, (703) 285-2100

Center Manager, Velma Mackall, (703) 285-2665

The R&T Technical Reference Center (TRC) is a repository of technical literature from the FHWA, the Transportation Research Board, the States, and the international highway community. TRC provides reference materials to TFHRC staff and visitors for performing research, developing new research studies, and performing continuing technical duties.

COMPUTER SERVICES

Robert Ellington, (703) 285-2037

Project Manager, Charles Liu, (703) 285-2684

R&D Computer Help Desk, (703) 285-3100

Computer Services are provided at TFHRC for facility operations and for systems/scientific applications programming analysis. The systems/scientific applications programming analysis includes modeling and simulation applications for structural research, traffic flow, vehicle dynamics, materials testing, and accident analysis. It provides information systems development and support for management and administrative functions, data acquisition and statistical analyses of field and experimental data, and model testing for verification and validation. Facility operations include the operation and administration of a local network system, remote batch processing and interactive time-sharing with internal and external mainframe installations, data/system security, and system access and/or technical assistance to FHWA personnel and contractors.

SAXTON HIGHWAY ELECTRONICS LABORATORY

Kenneth Moore, (703) 285-2466

The Saxton Highway Electronics Laboratory provides the following electronic support services to all laboratories and researchers at TFHRC:

- Designs and fabricates electronic instruments and systems.
- Writes and modifies applications software for electronic instrumentation.
- Installs equipment in test vehicles, laboratories, and field environments.
- Repairs, calibrates, and modifies computers, instruments, and systems.
- Conducts staff research studies.
- Provides audio/video presentation and duplication services.
- Maintains a large inventory of test equipment, tools, components, and materials.

MECHANICAL DESIGN/FABRICATION LABORATORY

Ricardo R. Ablaza, (703) 285-2097

Mechanical design and fabrication services are provided by this lab; lab technicians design and fabricate experimental equipment and devices that are not available commercially. The laboratory also maintains a central file of research equipment design drawings, manufacturer catalogues, the *Thomas Register*, and the *Sweets Catalogue*, which are available for use by all R&D research engineers, scientists, and engineering technicians.

TRAINING

National Highway Institute
Moges Ayele, Director, Special Strategic NHI Initiatives, (703) 235-0531

State Programs Division
Chief, (703) 235-0520

University, Industry, and International Programs Division
Bill Brown, Chief, (703) 235-0533

The National Highway Institute (NHI) is the external training arm of the FHWA. NHI provides technical training courses and carries out educational programs for Federal, State, and local governments; industry; universities; and the international transportation community. NHI is also involved in technology transfer activities in foreign countries.

State Training Programs, Short Course Areas

Program Manager
Larry Jones, 235-0523

- Mathematical Sciences
- Civil Engineering: Structures and Hydraulics
- Civil Engineering: Materials, Pavements, and Base Design
- Civil Engineering: Geotechnical
- Civil Engineering: Design and Traffic Operations
- Civil Engineering: Construction and Maintenance
- Right-of-Way
- Environment
- Urban Planning
- Automatic Data Processing
- Financial Management
- Civil Rights
- Highway Safety
- Communications

In collaboration with the University of Maryland, NHI is offering selected courses via satellite through its Distance Learning Program.

State Training Programs, Graduate Courses

Program Manager
Larry Jones, 235-0523

- Bridge Engineering
- Environmental Training Center
- Highway Materials Engineering
- Advanced Safety Management System

Industry Training Programs

Program Manager
Bill Williams, 235-0539

International Programs

International Research Fellowships Program
Bill Williams, 235-0539

International Technology Transfer Program
Bill Williams, 235-0539

International Training Program
Hana Maier, 235-0540

International Personnel Exchange Program
Hana Maier, 235-0540

Pan American Institute of Highways
Gregory Speier, 235-0546

University Programs

College Curriculum Program
Judith Turner, 235-0536

Dwight David Eisenhower Transportation Fellowships Program
Ilene Payne, 235-0535

University Transportation Centers Program
Harry Hersey, 235-0525

University Transportation Institutes Program
Harry Hersey, 235-0525

Distance Learning Program

Program Manager
Mac MacAdams, 235-0527

U.S. Department
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**Federal Highway
Administration**

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